ADJUSTING DEVICE FOR STRAPS OF A KNAPSACK

BACKGROUND OF THE INVENTION

1 Field of the Invention

The present invention relates to a knapsack, and more particularly to an adjusting device for straps of the knapsack.

2. Description of Related Art

Knapsacks generally have adjustable straps. However, conventional straps can not be adjusted while the knapsacks are carried on a back of a user, which is very inconvenient. As an improvement of the conventional straps, Fig. 7 illustrates an adjusting device permits adjustment of the length of the straps while the knapsacks are being carried.

With reference to Fig. 7, the conventional adjusting device has two strips (61) mounted on a back surface of a knapsack (not numbered). The strips (61) are made of metal material and parallel to two straps (60) of the knapsack. Two adjusting bands (62) each have a first portion movably provided outside the corresponding strip (61) and a second portion attached to the corresponding strap (60). Each strap (60) has an upper band (63) formed at an upper end thereof and a lower band (64) formed at a lower end thereof.

While carrying the knapsack, the user can pull the upper bands (63) to move the adjusting bands (62) along the strips (61) to adjust the straps (60), and tighten the lower bands (64) to secure the adjusting bands (62).

However, if the knapsack is heavy, there is a great pressure on the metal strips (61) borne by the back of the user, so the user will be uncomfortable or have a pain after carrying the knapsack for a long time.

Therefore, the invention provides an adjusting device for straps of a knapsack to mitigate and/or obviate the aforementioned problems.

SUMMARY OF THE INVENTION

The main objective of the invention is to provide an adjusting device for straps of knapsack wherein the length of the straps can be adjusted while the knapsack is carried whereby the optimum dispersal of the load of the knapsack is always conveniently achievable such that the user experiences the maximum efficiency and comfort.

Other objectives, advantages and novel features of the invention will become more apparent from the following detailed description when taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a perspective view of an adjusting device for straps of a knapsack in accordance with the present invention;

Fig. 2 is an exploded perspective view of Fig. 1;

Fig. 3 is a cross sectional top view of the adjusting device;

Fig. 4 is a cross sectional side view of the adjusting device;

Fig. 5 is a perspective view of the adjusting device assembled with a knapsack;

Fig. 6 is an exploded perspective view of the adjusting device assembled with the knapsack; and

Fig. 7 is a perspective view of a conventional adjusting device for straps of a knapsack.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference to Figs. 1-4, an adjusting device for straps of a knapsack in accordance with the invention is composed of a back board (10) and a sliding board (20). The back board (10) is attached to a back face of a knapsack and the sliding board (20) is attached to straps of the knapsack.

The back board (10) has two longitudinal slots (11) parallel to each other. An opening (12), of which a width is larger than a width of the longitudinal slot (11), is defined at a lower end of each longitudinal slot (11).

The sliding board (20) has multiple sliding blocks (21) formed at a surface facing the back board (10). A neck (22) is formed between each sliding block (21) and the sliding board (20). The sliding blocks (21) have a width smaller than the width of the openings (12) but larger than the longitudinal slots (11), and the necks (22) have a width smaller than the width of the longitudinal slots (11). By passing the sliding blocks (21) through the openings and receiving the necks (22) in the longitudinal slots (11), the sliding blocks (21) are movably mounted in the corresponding longitudinal slots (11).

With reference to Figs. 5 and 6, in assembling, the sliding board (20) is attached to two straps (30) and the back board (10) is attached to a back surface of a knapsack (31). The sliding blocks (21) are then movably mounted in the corresponding longitudinal slots (11). The straps (30) each have an upper band (32) provided at an upper end thereof and a lower band (33) provided at a lower end thereof.

For adjusting the straps (30), a user can pull the upper bands (32) to move the sliding board (20) along the longitudinal slots (11), and the length of the straps (30) is accordingly adjusted. Then, the lower bands (33) are tightened

to secure the sliding board (20) to the back board (10). Therefore, the user can adjust the straps (32) when the knapsack (31) is carried on the user.

According to the present invention, because the adjusting device is composed of a two-board structure with large surface areas to reduce the pressure borne by the back and the knapsack can be adjusted while being worn, the user will not feel discomfort or pain in the back after carrying the knapsack for a long time.

It is to be understood, however, that even though numerous characteristics and advantages of the present invention have been set forth in the foregoing description, together with details of the structure and function of the invention, the disclosure is illustrative only, and changes may be made in detail, especially in matters of shape, size, and arrangement of parts within the principles of the invention to the full extent indicated by the broad general meaning of the terms in which the appended claims are expressed.